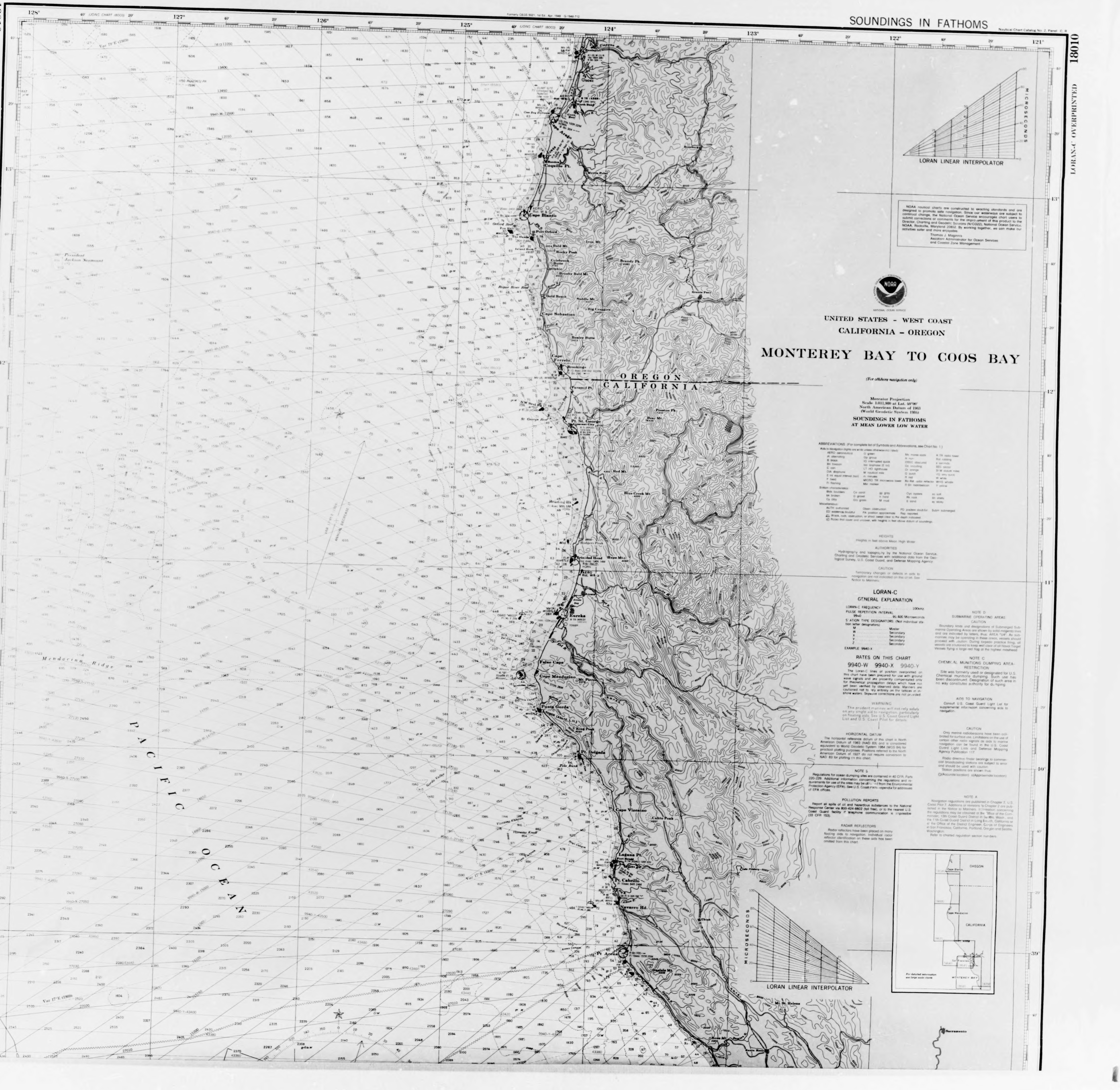
Formerly C&GS 5021, 1st Ed., Apr. 1948 G-1946-712

SOUNDINGS IN FATHOMS

Nautical Chart Catalog No. 2, Panel C, R



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Thomas J. Maginnis
Assistant Administrator for Ocean Services
and Coastal Zone Management

NATIONAL OCEAN SERVICE

UNITED STATES - WEST COAST
CALIFORNIA - OREGON
MONTEREY BAY TO COOS BAY

(For offshore navigation only)

Mercator Projection
Scale 1:811,980 at Lat. 40°00′
North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO	aeronautical	G	green	Mo	morse code	R TR	radio tower
Al	alternating	Gp	group	N	nun	Rot	rotating
B	black	IQ	interrupted quick	OBSC	obscured	s	seconds
Bn	beacon	Iso	isophase (E Int)	Oc	occulting	SEC	sector
C	can	LT HO	lighthouse	Or	orange	St M	statute miles
DIA	diaphone	M	nautical mile	Q	quick	VQ	very quick
E Int	equal interval (Iso)	m	minutes	R	red	W	white
F	fixed	MICRO TR	microwave tower	Ra Ref	radar reflector	WHIS	whistle
Fl	flashing	Mkr	marker	R Bn	radiobeacon	Y	yellow

Bottom characteristics:

Bids	boulders	Co	coral	gy	gray	Oys	oysters	so	soft
bk	broken	G	gravel	h	hard	Rk	rock	Sh	shells
Cy	clay	Grs	grass	M	mud	S	sand	sy	sticky

Miscellaneous:

AUTH	authorized	Obstn	obstruction	PD	position doubtful	Subm	submerged
ED	existence doubtful	PA	position approximate	Rep	reported		

21 Wreck, rock, obstruction, or shoal swept clear to the depth indicated
(2) Rocks that cover and uncover, with heights in feet above datum of soundings

HEIGHTS

Heights in feet above Mean High Water

AUTHORITIES

Hydrography and topography by the National Ocean Service, Charting and Geodetic Services with additional data from the Geological Survey, U.S. Coast Guard, and Defense Mapping Agency.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Notice to Mariners.

LORAN-C
GENERAL EXPLANATION

LORAN-C FREQUENCY 100kHz
PULSE REPETITION INTERVAL
9940 .... 99,400 Microseconds
STATION TYPE DESIGNATORS (Not individual station letter designators)
M .... Master
W .... Secondary
X .... Secondary
Y .... Secondary
Z .... Secondary
EXAMPLE: 9940-X

RATES ON THIS CHART

9940-W 9940-X 9940-Y

The Loran-C lines of position overprinted on this chart have been prepared for use with ground wave signals and are presently compensated only for theoretical propagation delays which have not yet been verified by observed data. Mariners are cautioned not to rely entirely on the lattices in inshore waters. Skywave corrections are not provided.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83) and is considered equivalent to World Geodetic System 1984 (WGS 84) for practical plotting purposes. Positions referred to the North American Datum of 1927 do not require conversion to NAD 83 for plotting on this chart.

NOTE S

Regulations for ocean dumping sites are contained in 40 CFR, Parts 220-229. Additional information concerning the regulations and requirements for use of the sites may be obtained from the Environmental Protection Agency (EPA). See U.S. Coast Pilots appendix for addresses of EPA offices.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

NOTE D
SUBMARINE OPERATING AREAS
CAUTION

Boundary limits and designations of Submerged Submarine Operating Areas are shown by solid magenta lines and are indicated by letters, thus: AREA "U4". As submarines may be operating in these areas, vessels should proceed with caution. During torpedo practice firing, all vessels are cautioned to keep well clear of all Naval Target Vessels flying a large red flag at the highest masthead.

NOTE C
CHEMICAL MUNITIONS DUMPING AREA-RESTRICTION

Site was formerly used or designated for U.S. Chemical munitions dumping. Such use has been discontinued. Designation of such area in no way constitutes authority for dumping.

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

CAUTION

Only marine radiobeacons have been calibrated for surface use. Limitations on the use of certain other radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and Defense Mapping Agency Publication 117.

Radio direction finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:
⊙(Accurate location) o(Approximate location)

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 13th Coast Guard District in Seattle, Wash., and the 11th Coast Guard District in Long Beach, California or at the Office of the District Engineer, Corps of Engineers in San Francisco, California, Portland, Oregon and Seattle, Washington.

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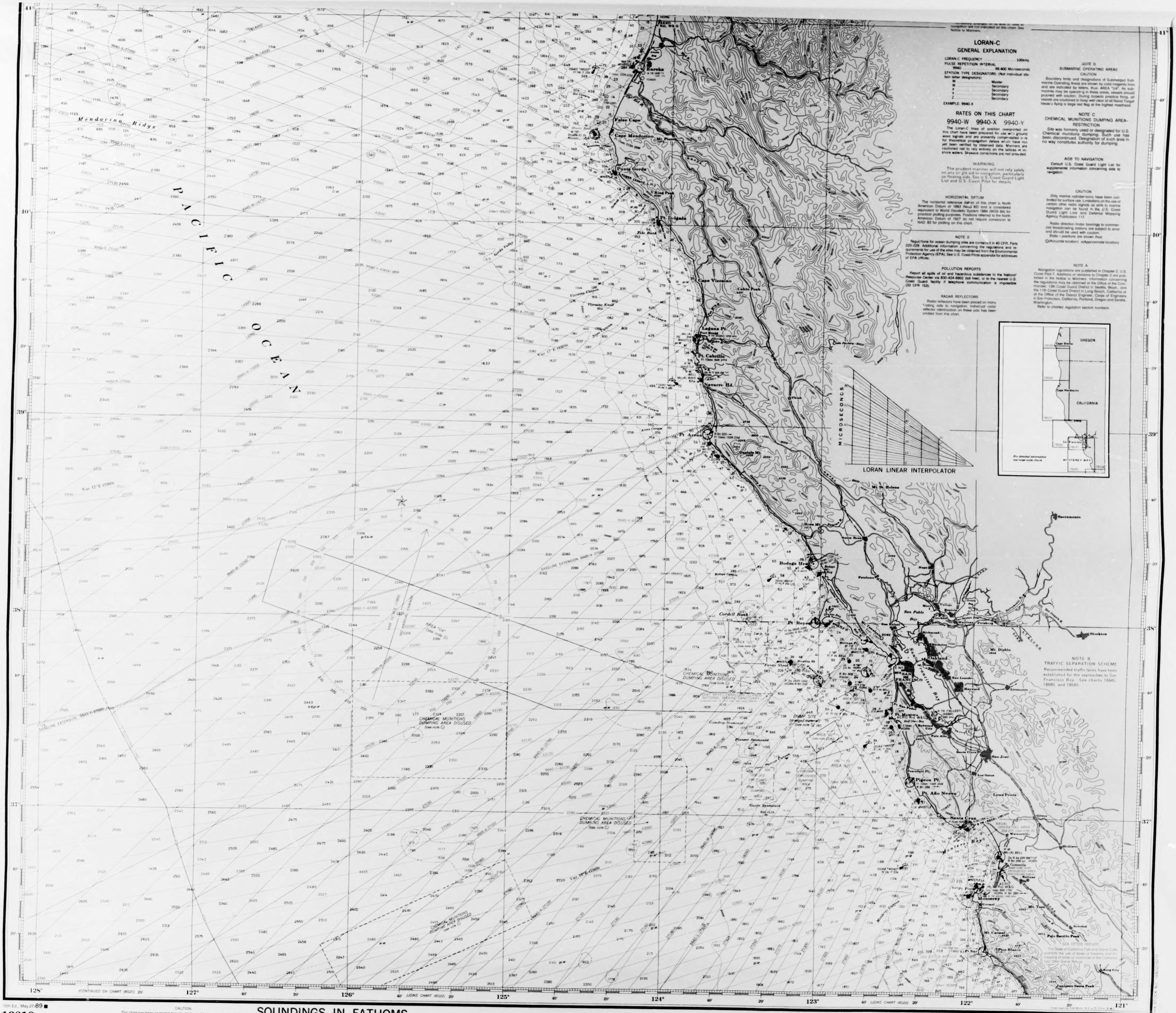

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POLLUTION REPORTS

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RADAR REFLECTORS

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NOTE D
SUBMARINE OPERATING AREAS
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Site was formerly used or designated for U.S. Chemical munitions dumping. Such use has been discontinued. Designation of such area in no way constitutes authority for dumping.

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Refer to charted regulation section numbers.

NOTE B
TRAFFIC SEPARATION SCHEME

Recommended traffic lanes have been established for the approaches to San Francisco Bay. See charts 18645, 18680, and 18640.

The State of California Fish and Game Code prohibits the use of bows or firearms and the trapping of birds or mammals in the California Sea Otter Game Refuge.

15th Ed., May 27/89 ■

18010
LORAN-C OVERPRINTED

CAUTION

This chart has been corrected from the Notice to Mariners published weekly by the Defense Mapping Agency Hydrographic/Topographic Center and the Local Notice to Mariners issued periodically by each U.S. Coast Guard district to the date shown in the lower left hand corner.

SOUNDINGS IN FATHOMS
For OMEGA coverage see reverse side

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102

METERS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

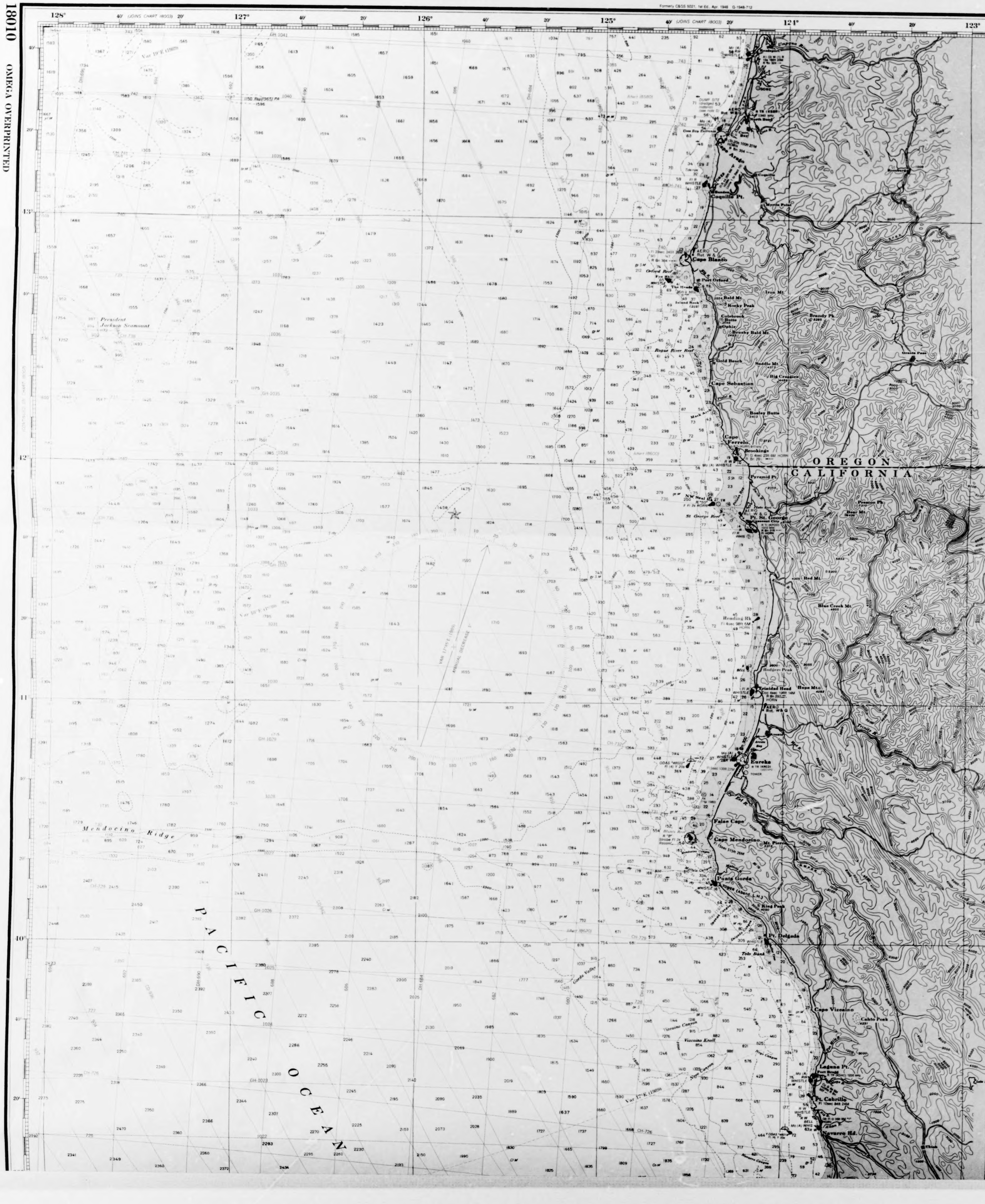
(Monterey Bay to Coos Bay)
SOUNDINGS IN FATHOMS - SCALE 1:811,980

18010
LORAN-C OVERPRINTED

Formerly C&GS 5021, 1st Ed., Apr. 1948 G-1948-712

SOUNDINGS IN FATHOMS

Nautical Chart Catalog No. 2, Panel C, R



OMEGA

GENERAL EXPLANATION

Basic Frequency .... 10.2 kHz.

PAIRS ON THIS CHART

CD DH CH DG GH

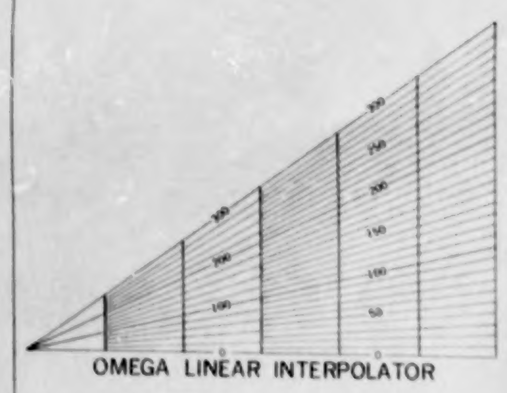
OMEGA STATIONS: (A – Aldra, Norway) (B – Monrovia, Liberia) (C – Haiku, Hawaii) (D – La Moure, North Dakota) (E – La Reunion Island, France) (F – Golfo Nuevo, Argentina) (G – Woodside, Australia) (H – Tsushima, Japan)

All users are cautioned that the OMEGA Navigation System is in an implementation stage. Station "OFF-AIR" periods and system changes will occur in the future. Such occurrences will be promulgated by Notice to Mariners and radio navigational warning messages. At present the worldwide accuracy and reliability of the OMEGA System can not be precisely determined. THEREFORE POSITIONING INFORMATION DERIVED FROM THE OMEGA NAVIGATION SYSTEM SHOULD NOT BE TOTALLY RELIED UPON WITHOUT REFERENCE TO OTHER NAVIGATIONAL POSITIONING METHODS.

When the OMEGA System is fully operational and its worldwide positioning accuracy verified, it is anticipated that the RMS accuracy will be approximately one nautical mile for daytime propagation paths and two nautical miles for nighttime propagation paths.

Propagation corrections must be used for plotting and reading OMEGA positions on this chart. OMEGA Propagation Correction publications are indexed and listed with price in Defense Mapping Agency Pub. 1-N-A. Pub. 1-N-A is available at Defense Mapping Agency sales agents and many National Ocean Survey sales agents, or it may be obtained directly from:

Defense Mapping Agency
Office of Distribution Services
Attention: DDCP
Washington, D.C. 20315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Al alternating	Gp group	N nun	Rot rotating
B black	IQ interrupted quick	OBSC obscured	s seconds
Bn beacon	Iso isophase (E Int)	Oc occulting	SEC sector
C can	LT HO lighthouse	Or orange	St M statute miles
DIA diaphone	M nautical mile	Q quick	VQ very quick
E Int equal interval (Iso)	m minutes	R red	W white
F fixed	MICRO TR microwave tower	Ra Ref radar reflector	WHIS whistle
Fl flashing	Mkr marker	R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

21 Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
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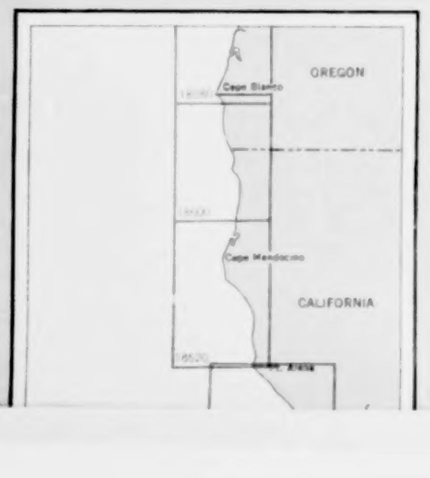

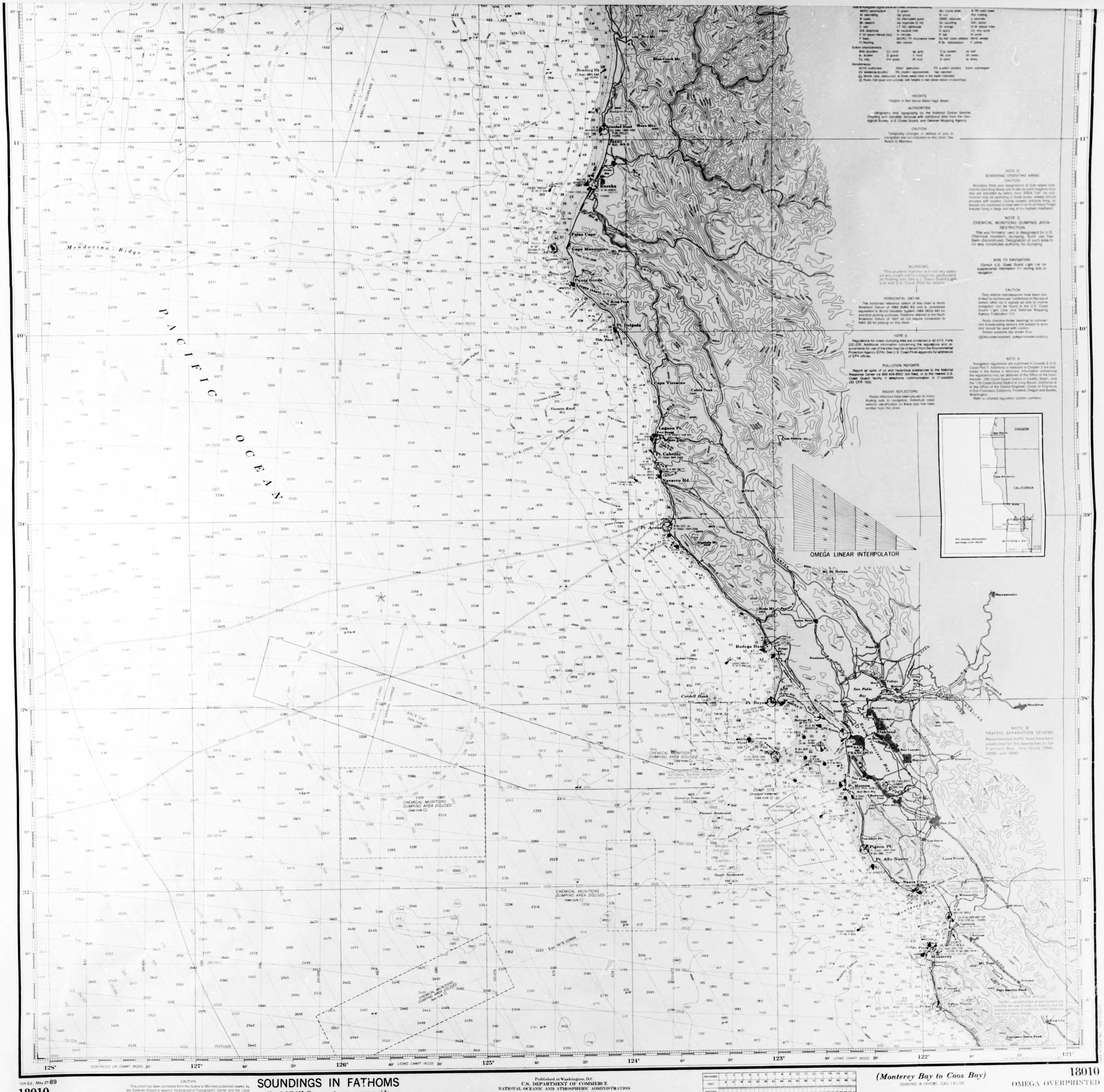

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m minutes
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Co coral
G gravel
Grs grass

gy gray
h hard
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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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(Monterey Bay to Coos Bay)

SOUNDINGS IN FATHOMS - SCALE 1:811,980

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